REMARKS

Claims 1-8 and 10-40 are pending. Claims 1, 2, 6, 7, 10, 19, and 25 have been amended, claim 9 has been canceled, and new claims 32-40 have been added to recite additional features of the embodiments disclosed in the specification.

In the Office Action, claims 1-5 were rejected under 35 USC §102(b) for being anticipated by the Rilly patent and the remaining claims were rejected under § 103(a) also based on this patent. Applicants request the Examiner to withdraw this rejection for the following reasons.

Claim 1 has been amended to recite that "the inductor stores energy recovered from the panel when the first switch is on and the inductor applies the stored energy to the panel when the second switch is on." The Rilly patent does not disclose or suggest these features.

The Rilly circuit includes an inductor L coupled between a panel capacitor Cp and an array of switches T4, T4-, T6, and T6-. (See Figure 3). By operating the switches, energy is recovered from and supplied to the panel capacitor to drive a pixel coupled to the panel capacitor. However, the energy recovery scheme used by Rilly is different from the claimed invention.

The Rilly circuit operates according to the timing diagram of Figure 4. When energy is to be recovered from the panel capacitor, switch T4- is turned on and all other switches are turned off. This causes the voltage stored in the panel capacitor to flow through inductor L. However, and importantly, the energy flowing through this inductor is not stored in the inductor for

energy recovery purposes. Rather, as soon as this inductor charges, the energy immediately discharges through switch T4- for **storage in** at least capacitor **C2**. All of this takes place as the voltage UCp in capacitor Cp falls from positive voltage V2, which corresponds to the time when switch T4- is on as shown in Figure 4.

During the time when the voltage of the panel capacitor falls from V2 to negative voltage V1 (e.g., during the times when switches T4-, T5±, and T6- are sequentially turned on), the energy recovered from the panel capacitor is stored in capacitor **C2** (or a combination of C1 and C2), **not** in the inductor L.

Thus, the Rilly patent does not teach or suggest that its "inductor stores energy recovered from the panel when the first switch is on" as recited in claim 1. This is further apparent from the Office Action. As indicated in the Office Action, the first switch corresponds to T1. However, when T1 is switched on, inductor L does not store energy from Cp. Rather, Rilly discloses that voltage source V2 is used to clamp the panel capacitor to a positive-polarity voltage at this time. (See Figure 4, where when T1 is on, UCp is clamped to maintain the positive voltage V2). Moreover, When T1 is on, voltage from voltage source V2 travels along a signal path that completely bypasses the inductor to clamp Cp at V2. (See Figure 3 when T1 is on).

The Rilly patent also does not disclose or suggest that its "inductor applies the stored energy to the panel when the second switch is on" as is further recited in claim 1. The Examiner indicated that the second switch corresponds to T2 in Figure 3 of Rilly. However, when T2 is on, inductor L does not apply stored energy to the panel capacitor. Rather, Rilly discloses that

voltage from voltage source V1 is used to clamp the panel capacitor to a negative-polarity voltage. (See Figure 4, where when T2 is on, UCp is clamped to maintain the negative voltage V2). Moreover, when T2 is on, voltage from voltage source V1 travels along a signal path that completely bypasses the inductor L. (See Figure 3).

Applicants therefore submit that the Rilly patent does not disclose or suggest all the features recited in claim 1. Furtherance of claim 1 and its dependent claims to allowance is respectfully requested.

Claim 5 recites "forming a third electrically conductive path between the inductor and the plasma display using a third switch" and "forming a fourth electrically conductive path between the inductor and the plasma display using a fourth switch connected, in parallel, to the third switch." The Rilly patent does not disclose or suggest these features.

The third switch was indicated to correspond to T1 of Rilly. However, as shown in Figure 3, switch T1 is coupled between inductor L and voltage source V2, **not** between inductor L and panel capacitor Cp as recited in claim 5.

The fourth switch was indicated to correspond to T2 of Rilly. However, as shown in Figure 2, switch T2 is coupled between inductor L and voltage source V1, **not** between inductor L and panel capacitor Cp as recited in claim 5.

Because the Rilly patent does not disclose all the features recited in claim 5, it is respectfully submitted that Rilly does not anticipate this claim. Furtherance of claim 5 and its dependent claims to allowance is therefore respectfully requested.

Claim 7 recites that "the second current path passes energy from the panel capacitance for storage in the inductor when the second switch is on, and the first current path applies the stored energy from the inductor to the panel capacitance when the first switch is on." The Rilly patent does not teach or suggest these features, i.e., Rilly does not disclose that energy is passed from panel capacitor Cp to inductor L when switch T2 is on. Rather, when T2 is on, voltage from source V1 is used to clamp the Cp at a negative voltage along a circuit path that completely bypasses the inductor, e.g., voltage source V1 is coupled to Cp along a path that passes through switch T2 and node N.

Moreover, Rilly does not teach or suggest that stored energy in inductor L is applied to Cp when switch T1 is on. Rather, when T1 is on, panel capacitor Cp is clamped at positive voltage V2 along a circuit path that bypasses inductor L.

Based on the foregoing differences, it is respectfully submitted that claim 7 and its dependent claims are allowable over the Rilly patent. Furtherance of these claims to allowance is respectfully requested.

Claim 19 has been amended to recite that "said inductor stores said energy while the panel capacitance is clamped at first predetermined voltage and wherein said energy is removed from said inductor to cause the panel capacitance to change to a second predetermined voltage." The Rilly patent does not teach or suggest these features. As previously discussed, the inductor of Rilly does not store any energy while Cp is clamped at negative voltage V1. Also, the energy

stored in inductor L is not removed in the manner recited in claim 19. Furtherance of claim 19 and its dependent claims to allowance is respectfully requested based on these differences.

Claim 25 recites that "the inductive coil stores energy recovered from the panel inter-electrode capacitor when a first one of the pair of switches is turned on and the inductive coil applies the stored energy to the panel inter-electrode capacitor when a second one of the pair of switches is turned on." These features are not taught or suggested by the Rilly patent. Accordingly, it is submitted that claim 25 and its dependent claims are allowable.

New claims 32-40 have been added to the application.

Claim 32 recites that "the first switch is turned on to allow the inductor to store energy recovered from the panel, the inductor storing the energy during a time when the sustain voltage supplied to the panel is clamped at a negative voltage." The Rilly patent does not teach or suggest that energy is stored in inductor L when switch T1 is turned on during the specific period of time indicated in claim 32. Applicants therefore submit that claim 32 is allowable, not only by virtue of its dependency from claim 1 but also based on the features separately recited therein.

Claim 33 recites that the second switch is turned on to allow the inductor to apply the stored energy to the panel when the sustain voltage is to rise to a positive voltage. The Rilly patent does not teach or suggest that the inductor L applies the stored energy to the panel when switch T2 is turned on when the sustain voltage is to rise in the manner recited in claim 33.

Applicants therefore submit that claim 33 is allowable, not only by virtue of its dependency from claim 1 but also based on the features separately recited therein.

Claim 34 recites that "the panel includes a panel capacitor and wherein the inductor is the **only** circuit element for storing energy recovered from the panel capacitor." The Rilly patent does not teach or suggest these features, i.e., Rilly shows in Figure 3 that capacitor C2 stores the energy recovered from Cp, and that this stored energy is then subsequently re-applied to charge Cp. Capacitor C3 also performs an energy storage function for a negative-polarity voltage. Therefore, Rilly includes multiple energy storage circuits including C2 and C3.

Claim 35 recites that "the inductor is to store energy recovered from the panel capacitor at a time when the sustain voltage supplied to the panel is clamped at a negative voltage, and wherein the inductor is to apply the stored energy to the panel capacitor during at a time when the sustain voltage is to rise to a positive polarity." These features are not taught or suggested by Rilly.

Claim 36 recites that "the first polarity voltage and the second polarity voltage have a same absolute value." Rilly does not teach or suggest these features, i.e., Rilly discloses that V1 and V2 are different voltages. (See column 3, lines 43-45).

Claim 37 recites that "the first switch has a first terminal coupled to the inductor and a second terminal coupled to the panel, and wherein the second switch has one terminal coupled to the first terminal of the first switch and another terminal coupled to the second terminal of the first switch." Rilly does not teach or suggest these features. As shown in Figure 3, switch T1

is coupled between node N of inductor L and a node coupled to voltage source V2. Also, switch T2 also is not coupled in the same manner as the second switch recited in claim 37. Furtherance of claim 37 to allowance is therefore respectfully requested.

Claim 38 recites that "the second terminal of the first switch is coupled to the panel through a first diode, and wherein said another terminal of the second switch is coupled to the panel through a second diode." The Rilly patent does not teach or suggest these features.

Claim 39 recites that "the third switch has a first terminal coupled to the inductor and a second terminal coupled to the plasma display, and wherein the fourth switch has one terminal coupled to the first terminal of the third switch and another terminal coupled to the second terminal of the third switch." The Rilly patent does not teach or suggest these features.

Claim 40 recites that "the second terminal of the third switch is coupled to the plasma display through a first diode, and wherein said another terminal of the fourth switch is coupled to the panel through a second diode." The Rilly patent does not teach or suggest these features.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and timely allowance of the application is respectfully requested.

To the extent necessary, a petition for an extension of time under 37 CFR § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and

please credit any excess fees to such deposit account.

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